

*Heidelberger*

September 19, 1957

Dear Charlie:

Greetings from the antipodes.

As you may know, I have been spending some weeks here on a Fulbright, lecturing in the Bacteriology Department, and re-searching in Burnet's lab. To my mild but pleasant surprise, it has been quite easy to work into the program on the genetics of the influenza virus, and within two weeks I've become reasonably well occupied with it. So I have some crosses running, and am worrying what "incomplete virus" may be all about.

Among the projects that Burnet has in tow here is a search for induced mutation in the flu virus, and it does look as if he has a reasonably good assay system, involving a rather infrequent (spontaneously) mutation from avirulence to virulence for mice in an egg-adapted strain of the influenza virus. It occurred to me that this would be an excellent, almost unique, opportunity to test the mutagenicity of fluoro-uracil for an RNA genetic system. So, the point of this letter is to ask you whether you would accede to a request for 50-100 mg of it. I won't be doing that particular work myself, but will help to design the experiments, and I don't think the material would be wasted. As long as I'm at it, I might ask you whether you have any other analogues (perhaps, e.g., the fluorouridine) that might be worth testing either as virucides (as I imagine has been done already) or as mutagens in this kind of a system. It is hard to say what that means, but the first promuracil <sup>run</sup> did give something, rather surprisingly.

What I may not have stressed properly is that there is no convincing evidence for the induction of mutation in any animal virus (albeit spontaneous mutations do occur), and I am personally very suspicious of the existing claims for the other RNA genetic systems like tobacco mosaic virus.

If you can furnish this material, would you be kind enough to have it airmailed (\$25<sup>00</sup> per 1/2 oz. or 84<sup>00</sup> the first 2 oz. by '2d class', 63<sup>00</sup> further 2oz.) to me c/o

Sir MacFarlane Burnet  
Hall Institute  
Royal Melbourne Hospital  
Parkville, Vic., Australia

Airmail takes  
5-6 days; surface  
mail as many weeks.

Thanks very much. Best regards from Esther & to Judy, and say hello to Alan if you ever see him. We'll be here till Nov. 1, will be back in Madison by the middle or end of Nov. (the latter if we stopover in India as is under consideration).

Yours,

P.S. If you prefer, send the samples over to Genetics and Mrs. Rehovetz will

Joshua Lederberg